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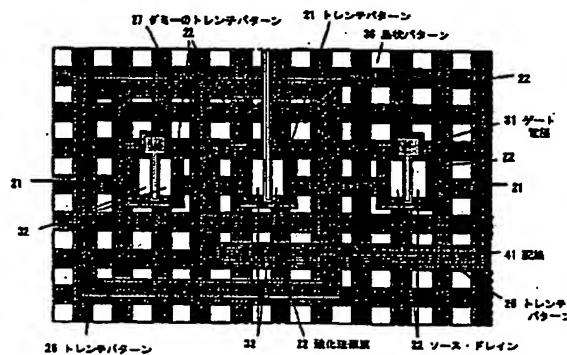
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(54)【発明の名称】 半導体装置および半導体装置の製造方法

(57)【要約】

【課題】 CMP法もしくはエッチバック法における平坦性のパターン依存性を低減し、表面に段差のない完全平坦化が実現されたトレンチパターンを形成できるようにする。

【解決手段】 素子領域外32に、規則性を有する繰り返しの溝の配列パターンであるダミーパターン27を設け、このダミーパターン27によって凸部が一様に分布するようにし、CMP法あるいはエッチバック法のパターン依存性を低減している。



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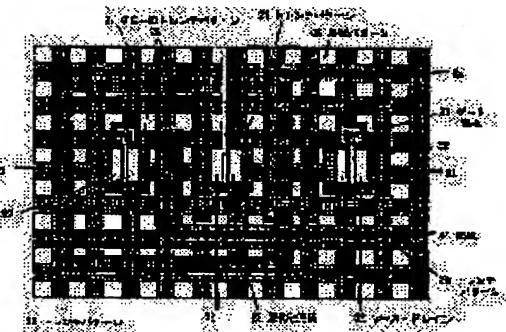
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## (54) SEMICONDUCTOR DEVICE AND MANUFACTURE OF SEMICONDUCTOR DEVICE

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To obtain a semiconductor device in which the flatness of a trench is increased by a method wherein the distance between adjacent protruding parts partitioned and formed by dummy patterns is set at a value in a specific range and the ratio of the average area of required element regions to the area of a fundamental unit is set at a value in a specific range.

**SOLUTION:** Dummy patterns 27 as groove or hole array patterns are formed in a region outside an element region and in a region excluding a trench pattern 21. Protruding parts which are partitioned and formed by the dummy patterns 27 exist so as to be repeated with regularity. In addition, the distance between the adjacent protruding parts is set at 10µm or lower, and the ratio of the average area of required element regions to the area of a fundamental unit is set at 0.5 or higher and 2 or lower. The trench pattern and the dummy patterns are buried with an insulating film. Thereby, the dependence of a pattern on the flatness of a trench can be reduced.



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